

RESULTS

Results with LSTM Encoder

At the start of training of Model 1

```
** init lr: 0.000200 decay_every_epoch: 100, lr_decay: 0.500000
Epoch: [ 0/600] [ 0/ 115] time: 18.3452s, d_loss: 2.71513557, g_loss: 0.05987190, rnn_loss: 0.39814478
** Epoch 0 took 18.347862s
Epoch: [ 0/600] [ 1/ 115] time: 0.7520s, d_loss: 7.58284616, g_loss: 0.98363864, rnn_loss: 0.41578957
** Epoch 0 took 19.467037s
Epoch: [ 0/600] [ 2/ 115] time: 0.7689s, d_loss: 3.43822098, g_loss: 5.90367985, rnn_loss: 0.36642528
** Epoch 0 took 20.413499s
Epoch: [ 0/600] [ 3/ 115] time: 0.7793s, d_loss: 3.13539481, g_loss: 3.94523931, rnn_loss: 0.43461281
** Epoch 0 took 21.376362s
Epoch: [ 0/600] [ 4/ 115] time: 0.7700s, d_loss: 2.42501211, g_loss: 4.19036770, rnn_loss: 0.39950821
** Epoch 0 took 22.316883s
Epoch: [ 0/600] [ 5/ 115] time: 0.7590s, d_loss: 1.76547170, g_loss: 7.29295969, rnn_loss: 0.37671489
** Epoch 0 took 23.251359s
Epoch: [ 0/600] [ 6/ 115] time: 0.7779s, d_loss: 2.24530554, g_loss: 8.58616924, rnn_loss: 0.36278740
** Epoch 0 took 24.201831s
Epoch: [ 0/600] [ 7/ 115] time: 0.7658s, d_loss: 1.72560644, g_loss: 7.15392113, rnn_loss: 0.40428185
** Epoch 0 took 25.139219s
Epoch: [ 0/600] [ 8/ 115] time: 0.7779s, d_loss: 2.20616889, g_loss: 9.65894222, rnn_loss: 0.42583171
** Epoch 0 took 26.095653s
```

At the end of training of Model 1

```
** Epoch 299 took 94.660959s
Epoch: [299/600] [ 106/ 115] time: 0.6862s, d_loss: 0.13770713, g_loss: 3.04208589, rnn_loss: 0.00000000
** Epoch 299 took 95.558896s
Epoch: [299/600] [ 107/ 115] time: 0.6752s, d_loss: 0.09952383, g_loss: 3.60013247, rnn_loss: 0.00000000
** Epoch 299 took 96.433553s
Epoch: [299/600] [ 108/ 115] time: 0.6897s, d_loss: 0.08396906, g_loss: 3.56471968, rnn_loss: 0.00000000
** Epoch 299 took 97.320781s
Epoch: [299/600] [ 109/ 115] time: 0.6703s, d_loss: 0.72593665, g_loss: 1.16938686, rnn_loss: 0.00000000
** Epoch 299 took 98.369963s
Epoch: [299/600] [ 110/ 115] time: 0.6782s, d_loss: 0.07729183, g_loss: 2.44814348, rnn_loss: 0.00000000
** Epoch 299 took 99.257569s
Epoch: [299/600] [ 111/ 115] time: 0.6851s, d_loss: 0.42945516, g_loss: 4.73155880, rnn_loss: 0.00000000
** Epoch 299 took 100.138190s
Epoch: [299/600] [ 112/ 115] time: 0.6772s, d_loss: 0.05418244, g_loss: 5.12564564, rnn_loss: 0.00000000
** Epoch 299 took 101.013874s
Epoch: [299/600] [ 113/ 115] time: 0.6883s, d_loss: 0.21822639, g_loss: 3.99041796, rnn_loss: 0.00000000
** Epoch 299 took 101.897581s
Epoch: [299/600] [ 114/ 115] time: 0.6874s, d_loss: 0.06646181, g_loss: 3.23890710, rnn_loss: 0.00000000
** Epoch 299 took 102.778419s
```

Results with GRU Encoder

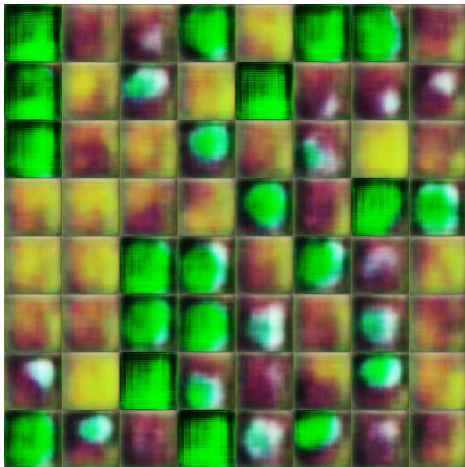
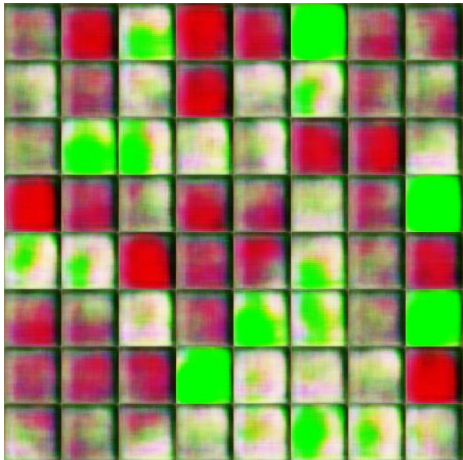


At the start of training of Model 2

```
** init lr: 0.000200 decay_every_epoch: 100, lr_decay: 0.500000
Epoch: [ 0/300] [ 0/ 115] time: 18.2961s, d_loss: 0.57489455, g_loss: 1.45441294, rnn_loss: 0.09782819
** Epoch 0 took 18.296147s
Epoch: [ 0/300] [ 1/ 115] time: 0.7530s, d_loss: 0.39089203, g_loss: 1.39505672, rnn_loss: 0.06653035
** Epoch 0 took 19.472326s
Epoch: [ 0/300] [ 2/ 115] time: 0.7492s, d_loss: 0.53552413, g_loss: 1.57248664, rnn_loss: 0.09114759
** Epoch 0 took 20.427936s
Epoch: [ 0/300] [ 3/ 115] time: 0.7810s, d_loss: 0.42855114, g_loss: 2.27682161, rnn_loss: 0.08244123
** Epoch 0 took 21.419360s
Epoch: [ 0/300] [ 4/ 115] time: 0.7839s, d_loss: 0.56539333, g_loss: 2.36425972, rnn_loss: 0.09971081
** Epoch 0 took 22.470567s
Epoch: [ 0/300] [ 5/ 115] time: 0.7790s, d_loss: 0.19272706, g_loss: 2.77141714, rnn_loss: 0.09440177
** Epoch 0 took 23.455047s
Epoch: [ 0/300] [ 6/ 115] time: 0.7790s, d_loss: 0.33873001, g_loss: 1.89321911, rnn_loss: 0.07889076
** Epoch 0 took 24.484298s
Epoch: [ 0/300] [ 7/ 115] time: 0.8039s, d_loss: 0.40707541, g_loss: 1.50492764, rnn_loss: 0.07340451
** Epoch 0 took 25.565443s
Epoch: [ 0/300] [ 8/ 115] time: 0.7630s, d_loss: 0.52866912, g_loss: 1.34444296, rnn_loss: 0.06376271
** Epoch 0 took 26.534916s
```

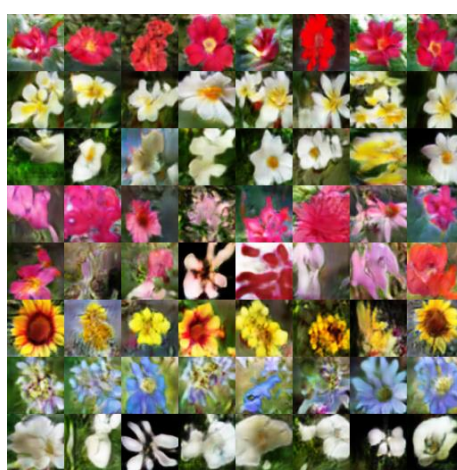
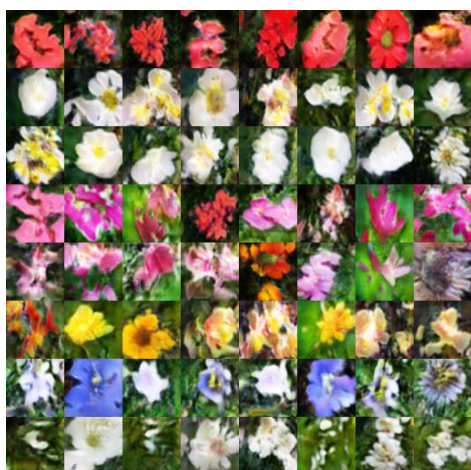
At the end of training of Model 2

```
Epoch: [299/300] [ 105/ 115] time: 0.6736s, d_loss: 0.11825995, g_loss: 2.85002953, rnn_loss: 0.00000000
** Epoch 299 took 103.807773s
Epoch: [299/300] [ 106/ 115] time: 0.7388s, d_loss: 0.12216836, g_loss: 3.40631390, rnn_loss: 0.00000000
** Epoch 299 took 104.807814s
Epoch: [299/300] [ 107/ 115] time: 0.7904s, d_loss: 0.16703233, g_loss: 3.65425396, rnn_loss: 0.00000000
** Epoch 299 took 105.802243s
Epoch: [299/300] [ 108/ 115] time: 0.6722s, d_loss: 0.03405572, g_loss: 4.18859005, rnn_loss: 0.00000000
** Epoch 299 took 106.668925s
Epoch: [299/300] [ 109/ 115] time: 0.6453s, d_loss: 0.12635192, g_loss: 4.51983261, rnn_loss: 0.00000000
** Epoch 299 took 107.607416s
Epoch: [299/300] [ 110/ 115] time: 0.8039s, d_loss: 0.19736400, g_loss: 2.97430253, rnn_loss: 0.00000000
** Epoch 299 took 108.617724s
Epoch: [299/300] [ 111/ 115] time: 0.6921s, d_loss: 0.05415584, g_loss: 4.86762810, rnn_loss: 0.00000000
** Epoch 299 took 109.508789s
Epoch: [299/300] [ 112/ 115] time: 0.6523s, d_loss: 0.02938031, g_loss: 3.80738282, rnn_loss: 0.00000000
** Epoch 299 took 110.446283s
Epoch: [299/300] [ 113/ 115] time: 0.9375s, d_loss: 0.01093413, g_loss: 4.82033443, rnn_loss: 0.00000000
** Epoch 299 took 111.577258s
Epoch: [299/300] [ 114/ 115] time: 0.7700s, d_loss: 0.07743304, g_loss: 3.48540187, rnn_loss: 0.00000000
** Epoch 299 took 112.555656s
```

Outputs Generated

<u>Epochs</u>	<u>Model 1</u> <u>LSTM Encoder</u>	<u>Model 2</u> <u>GRU Encoder</u>
0		
50		

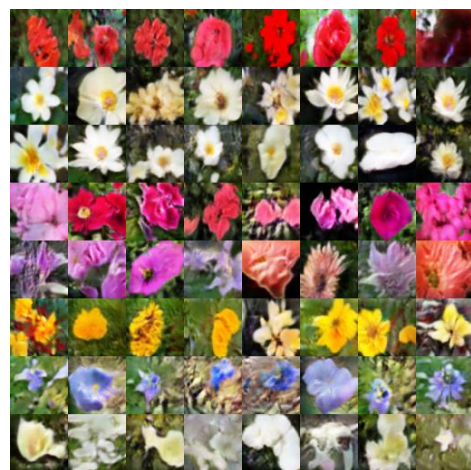
100



150



200



250



299

